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ABSTRACT

The development of an Attitude-Behavior Scale through an application of Guttman-Jordan facet design is detailed. The attitude scale was constructed to meet the need in law-related education for a valid attitudinal instrument to be used in research settings and in attitude change situations. A legal education program was used as a treatment in a quasi-experimental research design. Correlates/predictors of law-related attitudes were investigated through analysis of the responses of (1) 304 elementary students; (2) 112 eighth-grade students; and (3) 53 institutionally confined juveniles. Results indicate instrument reliability, decreases in positive attitude toward the law with age, and, the success of legal education intervention. (Author/GK)

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Guttman-Jordan Facet Design and the Study of
Law-Related Attitudes

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The concept of attitude is "indispensible" to the field of social psychology. No other concept appears as often in the experimental and theoretical literature (Allport, 1967, p. 3). While few dispute its importance there is little agreement concerning its definition (DeFleur and Westie, 1963; McGuire, 1969). The lack of a single agreed upon definition of attitude is probably due to a number of factors but in the main it most likely springs from the diversity of theoretical conceptions concerning its components (Shaw and Wright, 1967; Suedfeld, 1971). Conceptions of attitude as unidimensional, referring to the amount of affect for or against some psychological object, have given way to the notion that they are "complex, multi-dimensional concepts consisting of affective, cognitive and conative components" (Fishbein, 1967, p. 477).

According to Jordan (1975), the history of attitude research supports two fundamental conceptions: one emphasizes attitude as behavior (hence, the term attitude-behavior), the second views attitude as a predisposition to behavior. The position taken in the present research considers attitude as a "subclass of behavior" (Keisler et al, 1969, p. 23) within the Guttman (1950) conception of attitude as a "delimited totality of behavior with respect to (some referent)." Guttman's (1950) definition is in accord with the structural approach of Foa (1968), Foa and Turner (1970), and falls within the positivistic approach denoted by McGuire (1969).

Reviews of attitude research by Jordan (1968), Hamersma (1973), Harrelson (1970), and Gottlieb (1973) suggest that four clusters of variables have been identified as predictors/correlates of attitudes. They include: (a) demographic factors such as sex, socioeconomic status, and age; (b) one's value orientation; (c) contact with the attitude object, particularly the nature, quantity, voluntariness and perceived enjoyment of contact; and, (d) the amount of factual information one has regarding the attitude object. These

reviews also indicate numerous contradictions or inconclusive findings regarding predictor variables.

The history of attitude research reveals controversy regarding the inconsistency in the prediction of behavior from verbal assessments of attitude (See for example Liska, 1975; Cook and Selltiz, 1964; Chein et al, 1949). These findings, in turn, have been challenged on both theoretical and methodological grounds (See for example Erlich, 1969; Warner and DeFleur, 1969; Tittle and Hill, 1967). Jordan (1975) suggests that the alleged inconsistency can be explained by the failure of previous attitude scales to reflect the organization scheme for attitude sub-universes suggested by Guttman (1950). Jordan (1975) contends that a single attitude scale has, characteristically, been composed of various levels of Guttman's attitude-behavior paradigm (See Table 2) and that failure to control for the attitude-behavior level assessed will likely continue to produce inconsistent and conflicting results.

The use of facet design in attitude scale construction does not enjoy the popularity of the Likert and Thurstone techniques (See for example Vurdelja-Maglajlic and Jordan, 1974; Jordan, 1971). However, it appears that the majority of non-facet designed scaling efforts have produced items which, semantically, fall at the stereotypic level displayed in Table 4 (Jordan, 1968, 1971; Hamersma, 1969). The multi-level paradigm presented in Table 4 maintains that stereotypic attitudes and personal action occupy polar positions. According to the contiguity hypothesis (Guttman, 1959; Foa, 1958), the former should be least related to action-type behavior. Thus, if the items on an attitude scale are written at the stereotypic level (level 1) they should prove poor predictors of personal action (level 6). Jordan indicates that this is a methodological and theoretical problem which provides one explanation for the lack of predictive consistency (Jordan, 1971).

Similarly, Lemon (1973) in discussing the relative effectiveness of five different types of attitude measures in predicting behavior, notes that the scales which performed the best were those in which 90 percent of the items were written in the self-referent form (e.g., pertaining to 'I' or 'me').

Facet design may be considered as a theoretical and methodological model which has the following research advantages: (1) it offers the researcher a methodology through which the structure of an attitude scale can be controlled and it facilitates the analysis of predictor variables in attitude research¹; (2) it allows the researcher to set parameters in order to think systematically about the domain under study thereby serving as "a tool for the organization of ideas" (Fosket, 1974, p. 118) and aiding in item selection; (3) it facilitates item analysis and "space diagram" interpretation associated with multiple scalogram analysis (Lingoes, 1970); and, (4) it permits the assessment of the effectiveness of differing attitude change techniques at differing levels of attitude-behavior.

The present study applies the Guttman-Jordan facet design to the development of an attitude-behavior scale for use in assessing law related education programs.

LEGAL SOCIALIZATION--LAW-RELATED EDUCATION--ATTITUDES

Broadly speaking, the study of legal socialization is concerned with the ways in which individuals learn the rules and norms of their society (Tapp, 1974). One of the primary agents of legal socialization is the school. Law-related education represents a methodology of instruction, created through the combined efforts of state and local bar associations, members of the criminal justice system, and educationists, which is designed to enrich the social studies curriculum. The proponents of law-related education are "principally interested in changing the way students feel and act about the

law, law enforcement, legal processes and citizenship" (American Bar Association, 1975).

The research in the law-related education field is limited. Several investigations, usually based upon the political socialization research of the 1960's, have been aimed primarily at secondary school students. Findings suggest the following: law-related concepts (e.g., authority, rights, responsibilities, justice) can be taught to elementary students (Schnepf, 1966; Nepi, 1968; Dinsmore, 1971). Aspects of the legal socialization process may be cross-culturally invariate (Tapp, 1974). Information about the law increases with age but is modest in scope (Klar, 1974; Pargman, 1974; Markwood, 1975). Other findings indicate that law-related attitudes appear to become increasingly negative with age (Portune, 1965; Klar, 1974; Markwood, 1975) and that this decline in attitude more precipitous for blacks than whites (Portune, 1965; Markwood, 1975; Bouma, 1967; Liebschultz and Niemi, 1974). Drop-offs in attitude are also noted for males (Portune, 1965; Bouma, 1967; Fox, 1974); subjects of lower socioeconomic status (Bouma, 1967; Torney, 1971); and urban youth (Park, 1970; Klar, 1974).

Attempts to influence law-related attitudes within the formal school curriculum have met with some success. Participation in legal education appears to increase knowledge of law among students. Attitude assessments, however, are mixed with some instances of success (Wick, 1970, 1973, 1975; Peters, 1971) and some of failure (Goldman, 1970; Harris, 1970; Gerlach, 1973; Baker, 1975).

Contact with the criminal justice system appears to be a correlate of attitude. Subjects with official records of delinquency exhibit more negative attitudes than non-adjudicated youth (Chapman, 1956; Portune, 1965; Fox, 1974; Bowlus et al, 1974), although the magnitude of difference among older adjudicated and non-adjudicated youth may not be great (Rarick, Townsend, and Boyd,

1973; Scullen, 1974). Other investigators have found positive correlation between locus of control and law-related attitudes (Miller, 1969; Fox, 1973).

Despite this evidence of research, nationwide surveys conducted by the American Bar Association (1975) reveal a paucity of evaluative devices to assess program effectiveness. The evaluation deficiencies in law-related education are further described by Gerlach and Lamprecht (1975). They contend that the emergence of comprehensive and conclusive findings in the area have been hampered by the failure to develop sound evaluative instruments designed specifically for use in law studies programs.

The present study is concerned with: (1) the development, through an application of Guttman-Jordan facet design, of an instrument to assess student attitudes toward the law; (2) the application of that instrument in an investigation of the law-related attitudes of selected populations; (3) the investigation of the correlates/predictors of those attitudes.

DESIGN AND METHOD

An Attitude-Behavior Scale: Law-Education (ABS:LE) was developed through an application of Guttman's facet theory. This theory postulates that an attitude universe delineated by the item content can be substructured into components which are systematically related according to the number of identical conceptual elements they share (Guttman, 1959, 1966). Foa (1968), views facets as conceptual dimensions underlying a set of variables. Facet elements are considered values or points on this dimension. Substructuring an attitude universe into components or elements accommodates the sampling of items within each of the derived components, and also enables one to predict the relationships between the various components of the attitude universe. The resulting set of component areas should facilitate the comparison of sub-cultural, cross-cultural, and inter-cultural populations.

Essentially, facet design seeks to establish the content of a scale by a semantic, logical, a priori technique and to hypothesize the order that results from the data. In contrast, factor analysis attempts to interpret data a posteriori by naming correlational clusters (factors) resulting from a mathematical manipulation.

In a re-analysis of data drawn from a study of race relations in Brazil (Bastide and van den Berghe, 1957), Guttman (1959) extrapolated three facets and presented their elements in a paradigm. These three semantic facets, each containing two elements (Table 1) are related to four levels which Guttman names: (1) stereotype; (2) norm; (3) hypothetical interaction; and (4) personal interaction (Table 2). Each of Guttman's three facets contain a weak and strong element and the four levels denote a progression from weak to strong forms of behavior with one additional strong element appearing on each level.

In accordance with the paradigm suggested by Guttman, an attitude item written at level 1 reflects the individual's belief (a_1) that his group (b_1) compares itself (c_1) with the attitude object in a positive or negative valence. An item corresponding to level 4 deals with a subject's personal (a_2) reported behavior (b_2) in interacting (c_2) with the attitude object.

Consonant with the definition of attitude as a "delimited totality of behavior" (Guttman, 1950), Guttman suggests a common meaning in the ordering of profiles and levels. Levels progress from weak to strong regarding the nature of behavior vis a vis the subject-object relationship. Therefore, the more subscript "2" elements in a set, the greater the strength of the attitude or behavior. The notion of relative strength and the proximity of levels provides the theoretical basis from which to predict the order of the intercorrelation matrix of Guttman's four levels. Labeled the "contiguity hypothesis", items closest to each other semantically should correlate more

Table 1. Facets Employed by Guttman to Determine the Component Structure of an Attitude Universe

(A)	(B)	(C)
Subject's Behavior	Referent	Referent's Intergroup Behavior
a_1 = belief	b_1 = subject's group	c_1 = comparative
a_2 = overt action	b_2 = subject himself	c_2 = interactive

Table 2. Facet Profiles and Descriptive Labels of Attitude Levels

Level	Profile	Descriptive Label
1	$a_1b_1c_1$	Stereotype
2	$a_1b_1c_2$	Norm
3	$a_1b_2c_2$	Hypothetical Interaction
4	$a_2b_2c_2$	Personal Interaction

Table 3. Comparison of Guttman and Jordan Facet Designations

Designation	A	B	C	D	E
	<u>Referent</u>	<u>Referent Behavior</u>	<u>Actor</u>	<u>Actor's Intergroup Behavior</u>	<u>Domain of Actor's Behavior</u>
Jordan	a ₁ others	b ₁ belief	c ₁ others	d ₁ comparison	e ₁ hypothetical
	a ₂ self (1)	b ₂ experience (overt action)	c ₂ self (mine/my)	d ₂ interaction	e ₂ operational
		<u>Subject's Behavior</u>	<u>Referent</u>	<u>Referent's Intergroup Behavior</u>	
Guttman	--	b ₁ belief	c ₁ subject's group	d ₁ comparative	--
	--	b ₂ overt action	c ₂ subject himself	d ₂ interactive	--

Source:

John E. Jordan, Attitude-Behaviors Toward Educational Change in Latin America (East Lansing: International Rehabilitation Special Education Center, Michigan State University, 1975), p. 19.

Table 4. Joint Level, Profile Composition, and Labels for Six Types of Attitude Struction Measured by Jordan's Attitude-Behavior Scales

Subscale Type-Level	Profile by Notational System	Profile by Definitional System ^a	Attitude Level Descriptive Term
1	o b o c h	a ₁ b ₁ c ₁ d ₁ e ₁	Societal stereotype
2	o b o i h	a ₁ b ₁ c ₁ d ₂ e ₁	Societal norm
3	i b o i h	a ₂ b ₁ c ₁ d ₂ e ₁	Personal moral evaluation
4	i b m i h	a ₂ b ₁ c ₂ d ₂ e ₁	Personal hypothetical action
5	i e m i h	a ₂ b ₂ c ₂ d ₂ e ₁	Personal feeling
6	i e m i p	a ₂ b ₂ c ₂ d ₂ e ₂	Personal action

^aSee Table

12 Source:

Kenneth Gottlieb, "A Guttman Facet Analysis of Attitudes Toward the Mentally Retarded in Colombia: Content, Structure, and Determinants," (unpublished Ph.D. dissertation, Michigan State University, 1973), p. 52.

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highly than levels further away (Guttman, 1959; Foa, 1958). Graphically, the obtained correlation matrix results in a "simplex" ordering (Guttman, 1958, 1955, 1954).

Jordan (1968) accepts Guttman's three facets but includes two others to form a five-facet (Table 3), six-level paradigm (Table 4). While Jordan retains the original four levels, Personal Feeling (level 5) and Actual Personal Behavior (level 6) extend the model to include observable behavior thereby transcending thought, feelings, and opinions. Brodwin (1973, p. 163), maintains that included within Jordan's model "may be crucial levels at which attitude change occurs." This paradigm of attitude structure is termed "joint" struction.² Table 5 contains the rationale used in the Guttman-Jordan progression from a weak to a strong form of behavior.

Table 5. Rationale Employed in the Guttman-Jordan Progression From Weak to Strong Behavior in the Subject-Object Relationship

Facet	Rationale
A	the referent "other" is weaker than "self" (I) in being less personal.
B	"belief" is weaker than "experience" in being passive rather than active.
C	referring to the behavior of one's "self" (mine/my) rather than of "others" is stronger in that it implies personal involvement.
D	"comparative" behavior is weaker than "interactive" behavior since it does not imply social contact; a comparison is more passive than interaction.
E	"hypothetical" behavior is weaker than "operational" in that it does not imply acting out behavior.

Source:

Jordan, Attitude-Behavior Toward Educational Change in Latin America, p. 27.

For cross reference with other attitude analyses, note that McGuire's (1969) tricomponential analysis of attitude is comparable to Jordan's six level adaptation. Jordan also argues that the Guttman-Jordan paradigm also corresponds to the belief-value-attitude analysis advanced by Rokeach (Jordan, 1971).

Table 6 synthesizes the data presented in Tables 3 and 4 in that the semantic structure of Jordan's five-facet, six level system is specified by the element composition or facet profile of each level. The items employed in the ABS:LE, are written at level 4, Personal Hypothetical Action, of the Guttman-Jordan paradigm. They are constructed from a mapping sentence³ containing both joint and lateral facets so that every item in the scale conforms to the definitional statement for level 4. The relationship between joint and lateral structure displayed in the mapping sentence in Figure 1 is drawn from efforts to develop a number of attitude-behavior measures toward various attitude objects. Figure 2 displays a mapping sentence for the study of law-related education incorporating the lateral dimension in the Guttman-Jordan paradigm. ~~The~~ five-facet joint dimension employed in developing the semantic structure of attitude items is identical to that depicted in Table 3. Facets A-F displayed in Figure 2 provided the basis for the thirty-four content items written at level 4, Personal Hypothetical Action of attitude-behavior scales. Response mode (G) was assessed along a 4-point continuum ranging from "strongly agree" to "strongly disagree." Predictor variables H-O are measured by independent instrumentation and/or single or clustered items.

Reliability

Reliability estimates for the ABS:LE are calculated for each of the three population categories as suggested by Anastasi (1961). Cronbach's Coefficient Alpha represents the method used to determine internal consistency

Table 6. Five-Facet Six Level System of Attitude-Behavior Verbalizations: Levels, Facet Profiles, and Definitional Statements for Twelve Combinations

Level	Facet Profile	No ^a	Definitional Statements ^b	Descriptive Name
1	o b o c h a ₁ b ₁ c ₁ d ₁ e ₁	0	Others believe others' comparisons hypothetically	*Societal stereotype (group assigned group status)
2	i b o c h o b o i h a ₁ b ₁ c ₁ d ₂ e ₁ o b m c h	1	I believe others' comparisons hypothetically Others believe others' interactions hypothetically	Personally assigned group status *Societal norm
3	i b o i h a ₂ b ₁ c ₁ d ₂ e ₁ i b m c h o b m i h o e o i h	2	I believe others' interactions hypothetically I believe my comparisons hypothetically Others believe my interactions hypothetically Others experience others' interactions hypothetically	Group assigned personal status *Personal moral evaluation (perceived values) Self concept (personally assigned personal status) Proclaimed laws (group expectations) Group identity (actual group feelings)
4	i b m i h a ₂ b ₁ c ₂ d ₂ e ₁ o e o i p	3	I believe my interactions hypothetically Others experience others' interactions operationally	*Personal hypothetical action Actual group behavior
5	i e m i h a ₂ b ₂ c ₂ d ₂ e ₁	4	I experience my interactions (feelings) hypothetically	*Personal feeling
6	i e m i p a ₂ b ₂ c ₂ d ₂ e ₂	5	I experience my interactions (overt behavior) operationally	*Personal action

Source:

Arthur E. Dell Orto and John E. Jordan, "A Multivariate Analysis of Racial Attitudes: Structure, Content, and Determinants," *Rehabilitation Psychology*, XX (, 1973), 130.

^aNo.--number of strong elements: e.g., no "2" subscripts.

^bWords in parentheses are part of redundant but consistent statements.

*Combinations most commonly used in Attitude-Behavior scales.

Figure 1. A Mapping Sentence for the Joint and Lateral Struction Directed at a Variety of Attitude Objects

	(A) Referent		(B) Referent Behavior		(C) Actor	(E) Domain of Actor's Behavior	
Subject (x) attributes to referent	a ₁	others pop. as a whole non-disabled parents of disabled Negro, Jew, etc.	the referent behavior of	b ₁ belief and that b ₂ overt the action actor	c ₁ others pop. as a whole non-disabled parents of disabled Negro, Jew, etc. c ₂ self	e ₁ symboli- cally would ought e ₂ opera- tionally does	
	a ₂	self					
	(D) Actor's Intergroup Behavior		(F) Life Situations		(G) Importance		
d ₁ compares compare (with)			f ₁ personal traits f ₂ primary group relations f ₃ recreation f ₄ education f ₅ employment f ₆ health, welfare, and legislation f ₇ sex and family f ₈ secondary group relations	involving	g ₁ high g ₂ medium g ₃ low	level of im- portance under condi- tion (y)	
d ₂ interacts with specially help hire respond to (feel)		"specified" persons in					
	(H) Evaluation Process		(I) Trait Type	(J) Trait Level	(K) Valence		
h ₁ with respect to h ₂ because of h ₃ despite		their	i ₁ cognitive i ₂ affective i ₃ instrumental (physical) (behavioral) (coping)	j ₁ attributed trait (e.g., handicap) j ₂ actual trait (e.g., disability)	k ₁ positive k ₂ negative	valence toward "specified" persons	

Figure 2. Revised Mapping Sentence for the Study of Legal Education



(Table 7). A coefficient of stability (.63) was derived by calculating the product moment correlation between the pre and posttest scores of subjects in the control group. According to commonly used psychometric guidelines for discriminating among groups (Shaw and Wright, 1967; Borg and Gall, 1971; Thorndike, 1955), the ABS:LE is reliable in terms of internal consistency and stability.

Table 7. ABS:LE Alpha Coefficients
for the Three Population Categories

Category	<u>N</u>	Mean	Standard Deviation	Alpha
1. Elementary Students	304	99.79	8.77	.74
2. Junior High Students	112	94.67	9.92	.82
3. Juvenile Offenders	53	92.92	9.91	.72
Total Sample	469	97.79	9.57	.78

Validity⁴

Content validity is assumed of the ABS:LE. The systematic method for selection of items through the use of a mapping sentence may be superior to many attitude scaling methods. Facet theory assures that a representative sample is selected which taps the behavior domains of interest.

To provide data for concurrent validation, the research sample was chosen on the basis of presumed differences in age, knowledge of the law, and experience with the law and legal functionaries. It was assumed that a sample of juvenile offenders would express less positive law-related attitudes than junior high students and elementary youngsters. If such a difference appeared in the ABS:LE study, it would be interpreted as providing concurrent validation

for the instrument. Furthermore, an increasing age-related negativism toward the law has been noted in the law-related research. If this trend was indicated by the data, the ABS:LE should be measuring "attitude toward the law" offering support for the construct validity of the instrument. This will be discussed in the findings.

Instrumentation for Assessing Independent Variables

To investigate correlates/predictors of law-related attitudes the following test battery was administered: (1) a Law-Concept Inventory, measuring knowledge of legal concepts; (2) the Nowicki-Strickland Locus of Control Scale for Children (Nowicki and Strickland, 1973; MacDonald, 1973); (3) several items assessing the extent of contact with the criminal justice system; (4) a self-appraisal of scholastic achievement; (5) an assessment of the extent of mass media exposure; (6) a demographic survey. The battery was refined through several pilot studies and subsequent item analysis. It ranged between eighty-five and eighty-seven items with the variability in length caused by the two differing versions of the locus of control measure.

Instructional Program

To examine the ability of the ABS:LE to function in attitude change situations as recommended by Jordan (1975) and Nicholson (1972), and to provide evidence of the predictive validity of the attitude instrument (Shaw and Wright, 1967, p. 563), the scale was designed to serve as one dependent variable in a law-related instructional program. The instructional units which comprised the program represent a multi-media package designed to teach fifth- and sixth-grade students about the law using an inquiry format. Subjects were involved in extensive classroom discussions, participated in local field trips, role plays, simulations, and mock trials in an effort to increase law-related knowledge and affect attitude change.

The nonequivalent control group design (Campbell and Stanley, 1963) was adapted in evaluating the cognitive, attitudinal, and locus of control impact of the instructional program. To diminish the threats to the internal and external validity of the design, the recommendations of previous researchers (Campbell and Stanley, 1963, pp. 47-50; Borg and Gall, 1971, p. 393) were incorporated in the equalization of the treatment and control group.

Students (N=106) and teachers (N=5) involved in the instructional program represent fifth and sixth grade intact classrooms (N=5) in one suburban New York elementary school. Teachers responsible for instruction were trained by the principal researcher. Participation in the program required that teachers attend workshops at which materials and strategies were demonstrated, lessons evaluated, and scheduling constraints discussed. Subjects received approximately thirty hours of instruction over the course of six weeks extending from mid-April to the end of May 1977.

A control group (N=60) was selected from among intact classrooms in a neighboring elementary school within the same school district. Students in both treatment and control groups were recruited from the same grade levels and reflect similar socioeconomic status. Both schools display a similar organization, physical plant, and offer similar instructional programs. A comparison of the pretest ABS:LE means of randomly selected treatment and control subjects indicated no significant difference. Both groups received both pre and posttesting at the same points in time. The response mode and appropriate responses for test items were established well in advance of data collection. Scoring in all instances was objective.

Subjects

Three groups were chosen for study on the basis of projected variability (positive to negative) in attitudes toward the law and presumed differences

with respect to those independent variables suggested by reviews of attitude-behavior, political socialization, and law-related literature. The final set of scales were administered, by means of a standard set of procedures, to three criterion groups: (a) 304 elementary students, (b) 112 junior high school students, and (c) 53 juvenile offenders confined in a state training school. Student populations were drawn from two predominantly white, lower/middle and middle class, suburban communities. The student and juvenile offender populations employed in the study represent intact classrooms or units. Subjects were not drawn randomly. The method used in assigning students to classrooms in both school districts in which this study was conducted was, essentially, random. Junior high school subjects were enrolled in heterogeneously grouped eighth grade social studies classes. Although the nonrandom selection process reduces the generalizability of findings, the classrooms in the study were heterogeneous in terms of demographic variables, school achievement, intelligence, and similar to the general community from which they were recruited.

Data Analysis

The data obtained were analyzed by computer at Michigan State University. One-way analysis of variance, the Scheffe posteriori test, and Pearson product moment correlations were employed in the data analysis.

RESULTS AND DISCUSSION

The results of the study are reported and discussed in five sections. The first section relates attitudes, as measured on the attitude-behavior scale, to group membership. The second relates knowledge of legal concepts to group membership. Section three examines the relationship between demographic variables (e.g., sex and socioeconomic status) and the ABS:LE. The

Table 8. Demographic Characteristics
of Sample for ABS:LE Study

Sample			Sample		
Variables	N	%	Variables	N	%
1. <u>Sex</u>			2. <u>Population</u>		
Female	223	47.5	Elementary	304	64.8
Male	245	52.2	Junior High	112	23.9
Error	1	.2	Juvenile Offenders	53	11.3
3. <u>Age</u>			4. <u>Grade</u>		
9-10	121	25.8	5th	227	48.4
11-12	180	38.4	6th	76	16.2
13-14	114	24.3	7th	3	.6
15-16	30	6.4	8th	114	24.3
17-18	23	4.9	Other	48	10.2
Error	1	.2	Error	1	.2
5. <u>School</u>			6. <u>Socioeconomic Status*</u>		
North Country	120	25.6	White Collar	297	71.4
Mount	65	13.9	Blue Collar	119	28.6
Arrowhead	45	9.6			
Carle Place	74	15.8			
Murphy	64	13.6			
Gelinas	48	10.2			
Adrian	53	11.3			

*Does not include juvenile offenders

fourth section discusses the relationship between specified correlates/predictors of attitude and the attitude-behavior scale. The final section examines the effect on attitudes, knowledge, and locus of control of a law-related instructional program.

Relating Attitudes and Group Membership

It was expected that the population categories included in the study

would rank in the following order (from high to low) in positive attitude toward the law: (a) elementary students, (b) junior high students, (c) juvenile offenders. Table 8 indicates the mean scores and standard deviations for the three samples in the present study. Analysis of variance and Scheffe's post hoc procedure (Tables 10 and 11) are employed to determine whether differences in category means displayed in Table 9 are true category differences and to ascertain which sample categories are contributing to the significant overall F-ratio.

Table 9. ABS:LE Means and Standard Deviations by Population Category

Category	<u>N</u>	Mean	Standard Deviation
1	304	99.79	8.77
2	112	94.67	9.92
3	53	92.92	9.91
Total	469	97.80	9.57

Table 10. ANOVA Summary Table for Sample Categories on the ABS:LE

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F-Ratio
Between Groups	2	3,564.81	1,782.41	21.14*
Within Groups	466	39,299.53	84.33	
Total	468	42,864.34		

*Significant at the .0005 level

Table 11. Pairwise Comparisons for
Scheffe Values for the ABS:LE

Pairwise Comparison	Scheffe Values
Elementary Students vs. Junior High Students	5.04*
Elementary Students vs. Juvenile Offenders	3.68*
Junior High Students vs. Juvenile Offenders	1.15

*Significant at the .05 level

Consideration of Tables 9, 10, and 11 shows mean scores for the three population categories rank in the hypothesized order from positive to negative and that the magnitude of difference reaches statistical significance in comparisons of the elementary category to both junior high and juvenile offender categories. Differences in the category means of the junior high and juvenile offender categories reflect the hypothesized ranking but are not of sufficient magnitude to achieve statistical significance.

The findings are consistent with those extrapolated from both the political and legal socialization literature which suggests that attitude toward the law, although remaining positive in valence, becomes more negative with age. For example, an eleven-year-old would be more positive in attitude toward the law than a fourteen-year-old as measured on the ABS:LE.

The legal socialization literature suggests that the amount and nature of contact with legal authorities, particularly police, is predictive of negative attitude (Bouma, 1969; Portune, 1965). Therefore, it was presumed that juvenile offenders confined to a state correctional facility, by virtue

of their life experiences, would exhibit more negative attitudes than selected subjects of comparable age from a suburban, largely middle-class community. The data reflects the hypothesized ranking from positive to negative. The magnitude of this difference, however, does not reach statistical significance in the comparison of juvenile offenders and adolescents (See Chapman, 1955; Rarick, Townsend, and Boyd, 1973; Gallatin, 1972 for reports of similar findings).

Regarding behavioral intentions, the law-related attitudes of the junior high school students included in the study are not significantly different from those of the incarcerated juvenile offenders. The attitude items included in the attitude-behavior scale were written to conform to the Personal Hypothetical Action (level 4) of the Guttman-Jordan paradigm. Therefore, statements ask subjects to answer in terms of their behavioral intentions. As a consequence of behavior which resulted in their arrest and conviction, the juvenile offender has been confined to a correctional facility. It is a reasonable assumption that the behavioral intentions and personal actions (level 6 in the paradigm) of the juvenile offenders included in this study would be closely correlated. In contrast, the behavioral intentions and personal actions of the junior high school sample do not appear as closely correlated. While the actual extent of delinquent behavior is a matter of conjecture, reported "official" status as a juvenile offender, although clearly greater than within the elementary population, is not extensive. Illustrated in this findings is the utility of a paradigm which facilitates comparisons of group attitudes at a particular attitude-behavior level. The findings herein may, in fact, reflect an accurate appraisal of reality. The junior high subjects and the juvenile offenders may be similar in their behavioral intentions but dissimilar, at least at this point in time, in personal actions.

Relating Knowledge of Legal Concepts to Group Membership

The data in the present study support the findings of previous research which clearly supports the conclusion that the extent of both legal and political information increases with age (Tables 12 and 13). The Law Concept Inventory is designed to assess the respondent's understanding of such legal concepts as: equal protection of the law; due process; search and seizure; presumption of innocence, etc. The number of items answered correctly of the thirteen which constituted the inventory represents the scale score. Consideration of Table 12 suggests that knowledge of those concepts presented, while not extensive, reflect the hypothesized ranking. This finding is in general agreement with nationwide surveys concerning the extent of political knowledge among adults and adolescents summarized by Patrick (1977) and the legal socialization literature (See for example Markwood, 1975, p. 114).

Table 12. Descriptive Statistics for Sample Categories
on the Knowledge of Legal Concepts Variable

Category	<u>N</u>	Mean	Standard Deviation
1. Elementary Students	304	5.45	2.46
2. Junior High Students	112	6.87	2.40

Table 13. Analysis of Variance for the Knowledge
of Legal Concepts Variable on the LCI

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F-Ratio
Between Groups	1	163.21	163.21	27.264*
Within Groups	414	2,478.35	5.99	
Total	415	2,641.56		

*Significant at the .0005 level

Relating Demographic Variables of Sex and Socioeconomic Status to Law-Related Attitudes

Tables 14 and 15 present the descriptive data relating to sex variables in the ABS study and the ANOVA summary information for the three population categories. Contrary to the majority, but by no means universal, findings of the political and legal socialization literature, no significant difference between categories is noted. Massialas (1969), reviewing research in political socialization, concludes that male-female differences are more apparent in countries other than the United States. The finding of significant difference between male and females has been attributed to enculturation factors. Torney (1971) alleges that the role-transfer model causes the greater submissiveness and respect for authority of females.

No significant difference is noted in comparisons of the ABS:LE scores for the elementary categories on the basis of differing socioeconomic status (Tables 16 and 17). Social class as a predictor of political attitude has a traditional place in political socialization research (Eitzen, 1972; Torney, 1971; Hess and Torney, 1967). The formulation of the socioeconomic dichotomy

Table 14. Descriptive Data Relating to the Sex Variable in the ABS:LE Study

Category	<u>N</u>	Mean	Standard Deviation
Elementary Students			
Males	148	98.82	9.82
Females	155	100.73	7.53
Junior High Students			
Males	52	94.72	10.29
Females	60	94.63	9.67
Juvenile Offenders			
Males	45	92.48	10.29
Females	8	95.37	7.46

Table 15. ANOVA Summary Table for Population Categories on the Sex Variable

Cate- gory	Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F- Ration	F- Proba- bility
1	Between Groups	1	277.65	277.65	3.63	.0576
	Within Groups	301	23,002.12	76.42		
2	Between Groups	1	.19	.19	.002	.97
	Within Groups	110	10,913.20	99.21		
3	Between Groups	1	56.93	56.93	.58	.45
	Within Groups	51	5,045.43	98.93		

is based primarily upon 1970 census data rather than multifactor or single factor indices of social position.

The findings in the present study are similar to those of Torney (1971). She notes that attitudes toward the law and police arise from the differing experiences various socioeconomic groups have with law and authority.

Table 16. ABS:LE Means, and Standard Deviations
for the Socioeconomic Status Dichotomy

Group	<u>N</u>	Mean	Standard Deviation
White Collar/High Status	185	101.64	10.12
Blue Collar/Low Status	119	102.32	9.35

The findings may also be related to the cross-cultural studies of Tapp and Kohlberg (1971) and Tapp (1973), which emphasize the convergent law-related attitudes of children regardless of social class.

Table 17. ANOVA Summary Table for the
Socioeconomic Status Variable on the ABS:LE

Source of Variation	Degrees of Freedom	Sum of Squares	Squares	F-Ratio
Between Groups	1	33.78	33.78	.349*
Within Groups	302	29,174.41	96.60	
Total	303	29,208.18		

*Not significant at the .05 level

CORRELATES/PREDICTORS OF LAW-RELATED ATTITUDES

The locus of control, delinquent status, knowledge, and contact variables assumed to be correlates/predictors of attitude-behaviors appear moderately related to the Personal Hypothetical Action level in the present study. Consideration of Table 18 suggests that the locus of control construct and status as a juvenile offender emerge as the "best," albeit modest, predictors of attitude.

Locus of control is moderately related to law-related attitudes. Persons are generally regarded as handicapped by an external locus of control (MacDonald, 1973). Implicit, is the notion that attempts to produce increasingly positive law-related attitudes may result in orienting locus of control toward internality. Conversely, attempts to directly influence locus of control may affect law-related attitudes.

The condition of delinquency is age-related and a moderate correlate/predictor of negative attitudes toward the law. The juvenile offenders confined to a state training school appear as the group exhibiting the most negative attitudes. In addition, juvenile offender status is negatively correlated to the ABS:LE within the junior high sample and the total sample. Implicit also, is the notion that the greater the intensity of the involvement with the criminal justice system, the greater the negative effect upon attitudes.

The amount of factual knowledge of legal concepts one has is positively, although moderately, correlated to attitudes at the Personal Hypothetical Action level. The correlation between the Law Concept Inventory and the ABS:LE may be attributed to the general inconsistency noted in the knowledge-attitude relationship (Harrelson, 1970; Gottlieb, 1971). Knowledge correlates more strongly with cognitive levels of the Guttman-Jordan paradigm than to the affective and action levels (Jordan and Maierle, 1969; Dell Orto and Jordan, 1973).

The increase of law-related knowledge and concomitant increase in negative attitudes with age, suggest that increasing intellectual understanding of the law, legal processes, and legal institutions may not lead to more positive attitudes. Implied in the goals and objectives developed by proponents of law-related education is that increasing one's knowledge of the law breeds respect (See for example Morris, 1973). The findings reported in this study question that premise.

The use of attitude scales derived through facet design in a variety of studies has demonstrated the utility of "contact" as a correlate of attitudes, particularly at the affective and conative levels of the paradigm (See for example Erb, 1969; Morin, 1969). The legal socialization literature strongly suggests that the number of police contacts is related to negative attitudes toward the police (Portune, 1973). The inability, in the present study, of the contact items to correlate as expected may have resulted from the failure to adequately define and control the nature of contact in the settings presented in questionnaire items. The inconclusive, often contradictory findings of attitude research in ethnic relations have been attributed to lack of clarity in definitions of contact (Cook and Selltiz, 1955). Amir (1969), in summarizing the literature on the contact variable, notes that the valence of attitude is dependent upon the favorableness of the conditions of that contact. In the present study the contact variable is assessed by questionnaire items which reflect a combination of both positive and negative settings, a circumstance which confounds both the statistical analysis and the interpretation of findings.

Attitudes, Knowledge, Locus of Control, and the Law-Related Instructional Program

The instructional program outlined in previous sections served to assess the applicability of the ABS:LE in attitude change situations (Jordan, 1975;

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Table 1. Pearson Product Moment Correlations and Significance Levels Between the ABS:IE and Selected Correlates/Predictors Operationalized as Independent Variables in the Attitude-Behavior Study.

Category	N	Nowicki-Strickland Locus of Control Scale	Contact With Criminal Justice System	Law-Concept Inventory	J.D. Status
Elementary	304	.29 (.01) ^a	-.04 (N.S.) ^b	.04 (N.S.)	-.05 (N.S.)
Junior High	112	.25 (.01)	-.07 (N.S.)	.14 (N.S.)	-.32 (.01)
Juvenile Offenders	53	-.04 (N.S.)	.13 (N.S.)	N.C.	-.16 (N.S.)
Total Sample	469	.15 (.002)	N.C. ^c	.12 (.05)	-.26 (.001)

^asignificance level in parentheses

^bNot Significant at the .05 level

^cNot Computed

Nicholson, 1972) and to provide evidence of the predictive ability of the attitude-behavior scale. Shaw and Wright (1967, p. 563) note that few scales are validated by the predictive method possibly because of the large amount of work required to estimate such validity. Nevertheless, evidence of predictive validity strengthens a scale and is particularly important when one wishes to relate attitudes and action. Table 19 presents the descriptive data and ANOVA which compared the gain scores for the treatment and control groups on three dependent variables.⁵

Table 19 shows that the attitudes of those students exposed to the law-related program were more positive than those of a control group. The findings speak well for the ability of the ABS:LE to assess change and is supportive of the predictive validity of the instrument. Certainly, attributing the statistical difference to the effects of the instructional program is tenuous considering the non-experimental nature of the design, although the law-related program appears to have been at least influential in contributing to the findings.

Interestingly, the findings displayed in Table 19 indicate that the cognitive outcomes of the instructional program were not as extensive as the attitudinal effects. These data contrast with the findings of prior assessments of program effectiveness which indicate that cognitive achievement outweighs affective attainment.

Table 19, displaying the mean gain and ANOVA results for the locus of control variable, indicates no significant difference between the treatment and control groups. These findings are in general agreement with those of Nowicki and Barnes (1973) and Fletcher (1973) who employ the Nowicki-Strickland Locus of Control Scale in change situations.

Table 19. Treatment and Control Group Mean Gain, Standard Deviations, F-Ratios and Significance Levels on ABS:LE, Law-Concept Inventory, Locus of Control Scale Serving as Dependent Variables in the Law-Related Instructional Program

Variable	Group	N	Mean Gain	Standard Deviation	F-Ratio	Significance Level
ABS:LE	Treatment	106	2.70	6.91	14.387	.0005
	Control	60	-1.77	7.92		
Nowicki-Strickland Locus of Control Scale	Treatment	106	1.65	5.81	3.163	Not Significant at the .05 level
	Control	60	- .07	6.30		
Law-Concept Inventory	Treatment	106	.36	2.01	3.99	.05
	Control	60	- .30	2.10		

MacDonald (1973) maintains that the pervading belief in the locus of control literature suggests that it is "desirable to change people, especially those who are not doing well in society, in the direction of internality" (pp. 171-174). The literature also suggests that juvenile delinquents are more external in locus of control than their non-delinquent counterparts (Miller, 1969; Moser and Moser, 1973). If law-related instruction could influence program participants toward internality, supporting evidence regarding the utility of such programs to mitigate aggressive, impulsive, and delinquent behavior would have accrued.

IMPLICATIONS

The implications of the present study are discussed in terms of their methodological and curriculum impact.

The ABS:LE was first piloted and later tested with students drawn from "typical" fifth and sixth grade elementary classrooms and eighth grade junior high school social studies classes in predominantly white, lower middle and upper-middle class communities. There is reason to believe that the instrument is a reliable and valid measure which can be administered to a large proportion of elementary school and junior high students with demographic characteristics similar to those included in the study. Furthermore, there is no reason to believe that the methodology employed in developing the instrument cannot be applied to similar instrument development for use with any learner population.

As the cognitive outcomes of learning in the content areas have their respective affective and conative components, the methodology employed to construct the attitude-behavior scale in law-related education has its implications for use in other content areas.

The attitude-behavior scale can be used to ascertain whether or not attitude change is occurring and on what levels. Implied is the idea that

attitude change can occur on the more cognitive levels of attitude-behavior and not produce overt behavioral change. Persons may absorb factual information which may change their cognitive perceptions of other persons' attitudes without changing their own behavior. To change personal overt behavior, changes must occur in attitudes on the affective and conative dimensions of attitude behavior. The implications for law-related education seem clear. In order to affect behavioral change, programs must be aimed at these latter levels of the Guttman-Jordan paradigm. Within the present context, law-related programs for public school children should provide opportunities in which members of the criminal justice system can interact with students. Furthermore, consideration of the principles involved in changing attitudes strongly suggests that the characteristics of the source of information is at least as important as the message itself. Therefore, it is essential that personnel involved in law-related programs be chosen with care. Personnel should be familiar with learning theory, the nature of the curriculum, and the principles of attitude change.

The reliability and validity of the Attitude-Behavior Scale has been demonstrated in the present study. Evidence of inter-item consistency and test-re-test reliability support the conclusion that the ABS:LE can adequately discern group differences. Support for the content, concurrent and predictive validity of the scale indicates that the ABS:LE indeed measures the law-related attitudes it was designed to measure. It is believed that the ABS:LE is the first instrument developed through an application of facet theory to be used in social studies education generally, and in law-related education specifically.

NOTES

1. For example, 'contact' with the attitude object has been employed in numerous studies as a predictor/correlate of attitude. The correlation between contact and the six levels of the Guttman-Jordan paradigm would be expected to vary with the nature of the subject-object relationship.
2. Joint struction refers to that part of the semantic structure of attitude items which can be determined without consideration of item content. It defines the level of strength of the attitude being measured in the subject-object relationship. The complement of joint struction, lateral struction, stipulates and discriminates attitude item content through additional facets.
3. The mapping sentence refers to the pattern or structure characteristic of facet theory which facilitates the selection of item content. It assures that a representative sample of the desired behavior domains are included. The pattern displays the elements and facets one considers essential, and allows items to be constructed which include those elements.
4. The criterion typically employed to gain construct validity for facet designed scales is the generation of the "simplex" configuration. As the Attitude-Behavior Scale: Law-Education was written at one level of the Guttman-Jordan paradigm, a simplex approximation was not possible. Validity for the scale was, therefore, derived by the known-group method, certain evidence of predictive validity, and the content validity assumed in the mapping sentence.
5. Analysis of covariance, employing pretest scores as the covariate, may be more desirable and precise than simple gain scores, although the latter is applicable and widely employed (Campbell and Stanley, 1963, p. 23).

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